

1  
1 CLAIMS:

2 1. A method for determining the amount of a remediation chemical to be added to a  
3 measured quantity of non-aqueous fly ash to lower the adsorption potential of said fly ash when  
4 said fly ash is subsequently incorporated into an aqueous cementitious mixture comprising the  
5 steps of:

- 6 a. obtaining a weighed portion of said measured quantity of said non-  
7 aqueous fly ash and placing said portion of said measured quantity of fly  
8 ash in a container;  
9 b. obtaining a measured amount of a liquid, color reactive reagent having a  
10 first color dependent upon the weight of dye in said reagent;  
11 c. adding to said portion of said measured quantity of said non-aqueous fly  
12 ash in said container, said measured amount of liquid color-reactive  
13 reagent;  
14 d. allowing said liquid reagent and said non-aqueous fly ash to mix in said  
15 container;  
16 e. removing a portion of said mixed liquid reagent from said container;  
17 f. assaying said removed portion of said mixed liquid reagent to determine  
18 the magnitude of color change of said liquid reagent from said first color;  
19 g. determining the weight of dye adsorbed by said portion of said measured  
20 quantity of said non-aqueous fly ash;

1 h. dividing the weight of said dye adsorbed by said weight of said portion of  
2 said measured quantity of non-aqueous fly ash to determine an adsorption  
3 index;

4 i. obtaining a quantity of said remediation chemical said remediation  
5 chemical having a coefficient constant,  $\alpha$ , in the range of 0.5 to 1.0, said  
6 quantity being determined by multiplying said coefficient constant  $\alpha$  by  
7 said adsorption index and by said weight of said measured quantity of said  
8 non-aqueous fly ash; and

9 j. adding said quantity of said remediation chemical to said measured  
10 quantity of said non-aqueous fly ash prior to said non-aqueous fly ash  
11 being incorporated into said aqueous cementitious mixture.

12 2. The method of claim 1 wherein said remediation chemical is selected from the  
13 group consisting of an ethoxylate, sodium laureyl sulfate, and tall oil, said amount of said  
14 chemical in the range of about 0.0001 weight % to about 20 weight % solid to solid.  
15

16 3. The method of claim 1 wherein said remediation chemical is selected from the  
17 group consisting of a detergent, a surfactant, and an emulsifier, said amount of said chemical in  
18 the range of about 0.0001 weight % to about 20 weight % solid to solid.  
19

20 4. The method of claim 2 wherein said amount of said chemical is in the range of  
21 about 0.001 weight % to about 2.0 weight % solid to solid.  
22

1            5.        The method of claim 3 wherein said amount of said chemical is in the range of  
2        about 0.001 weight % to about 2.0 weight % of solid to solid.

3